

another computer to access the shared disk connected to said another computer if access is requested to the shared disk connected to said another computer.

REMARKS

Attached hereto is a marked-up version of the changes made to the claims by the current Amendment. The attached is captioned "Version with markings to show changes made".

The present Amendment amends claims 88-103. Therefore, the present application has pending claims 88-103.

Claims 88-103 stand rejected under 35 USC §103(a) as being unpatentable over Akizawa (U.S. Patent No. 5,584,724) in view of Choquier (U.S. Patent No. 5,774,668). This rejection is traversed for the following reasons. Applicants submit that the features of the present invention as now recited in claims 88-103 are not taught or suggested by Akizawa or Choquier whether taken individually or in combination with each other as suggested by the Examiner. Therefore, Applicants respectfully request the Examiner to reconsider and withdraw this rejection.

Amendments were made to the claims in order to more clearly describe features of the present invention. Particularly, amendments were made to the claims so as to more clearly describe that the present invention is directed to an apparatus and computer program implementing a technique for sharing disks between a plurality of computers. It should be noted that the present invention provides a disk sharing technique which allows for plural computers to each have access to the same disk included in a plurality of disks rather than a file sharing system such as

that implemented by a network file system (NFS) which accomplishes file sharing by a remote procedure call (RPC) in a loosely coupled computer system as discussed in the Background of the Invention section of the present application.

The present invention is particularly directed to the sharing of disks between loosely coupled computers. Attached herewith is a document which describes disk sharing as a technique among plural computers. The disk sharing technique described in the attached document essentially sets forth that a shared disk can be referenced using the same drive letter by a plurality of work stations that need to access the shared disk. The term "disk sharing" has a well accepted meaning in the art and as such is recognized by those skilled in the art as being quite different from "file sharing". The present invention as recited in the claims is directed to a disk sharing technique not a file sharing technique.

File sharing as is well understood by those of ordinary skill in the art is merely concerned with the sharing of files that may exist in storage among a plurality of computers. When anyone of the computers, which may exist in a file sharing system which is to access another file resident on another computer, the computer does not obtain control of the disk of the other computer as in a disk sharing system to which the present invention is directed. In a file sharing system the computer is merely able to obtain the file without regard to whether the file may exist in a disk (peripheral device) or not without gaining control of a disk attached to the other computer.

The present invention as now more clearly recited in the claims is directed to a disk sharing technique which allows for anyone of a plurality of computers to gain

control of a shared disk attached to another computer to which control can be obtained by anyone of the other computers.

According to the present invention when a disk access request is provided so as to gain control of a particularly shared disk, the disk request includes a disk identification (ID). Such a disk ID is not necessary in a file sharing system since the file sharing system is not intended to permit anyone of the computers to gain control of a disk in another computer.

Akizawa is directed to a file sharing system not a disk sharing system and therefore does not anticipate or render obvious the features of the present invention as now more clearly recited in the claims. In Akizawa, a file access request is converted into information on the file server based on information, for example, contained in a file attribute table as illustrated in Fig. 5 and as discussed on col. 5, lines 36-45 thereof. This converted information as taught by Akizawa does not include a disk ID so as to allow for the computer requesting the file access to gain control of the shared disk as in a disk sharing technique as in the present invention.

Therefore, as is quite clear from the above, the features of the present invention as now recited in the claim are not taught or suggested by Akizawa whether taken individually or in combination with any of the other references of record.

Therefore, Akizawa fails to teach or suggest a processor for issuing a disk request to the plurality of shared disks for requesting access to one of the shared disks and a disk request processing section for processing the disk request issued to the shared disk as recited in the claims.

Further, Akizawa fails to teach or suggest that the disk request processing section processes the disk request to the shared disk connected to the computer if the disk request requests access to the shared disk connected to the computer and sends the disk request to another computer to access the shared disk connected to the another computer if the disk request requests access to the shared disk connected to the other computer as recited in the claims.

In the Office Action the Examiner alleges that Akizawa teaches the issuing of a request to the shared memory devices. However, as is shown above, the request taught in Akizawa is merely a file access request not disk access request which allows for the requesting computer to assume control of the shared disk as in the present invention.

The above noted deficiencies of Akizawa are not supplied by Choquier. Therefore, the combination of Akizawa and Choquier fails to teach or suggest the features of the present invention as now more clearly recited in the claims.

Choquier merely teaches an online services network including application services and gateway computers that are interconnected by a LAN wherein the gateway computer receives service requests where upon access to a service is obtained so as to locate application servers that are currently running a corresponding service application. According Choquier remapping of the service applications is conducted periodically so as to balance the loads between the application servers. Thus, it would appear that Choquier is directed to apparatus entirely different from that of the present invention, load balancing as oppose to disk sharing.

Therefore, even if Akizawa could be combined with Choquier in the manner suggested by the Examiner, the combination would still fail to teach or suggest the features of the present invention as now recited in the claims.

Therefore, based on the above, Applicants respectfully request the Examiner to reconsider the 35 USC §103(a) rejection of the claims as being unpatentable over Akizawa and Choquier.


The remaining references of record have been studied. Applicants submit that they do not supply any of the deficiencies noted above with respect to the references utilized in the rejection of claims 88-103.

In view of the foregoing amendments and remarks, Applicants submit that claims 88-103 are in condition for allowance. Accordingly, early allowance of claims 88-103 is respectfully requested.

To the extent necessary, the applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, or credit any overpayment of fees, to the deposit account of Antonelli, Terry, Stout & Kraus, LLP, Deposit Account No. 01-2135 (501.34424CX1).

Respectfully submitted,

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